All-Weather Road Servicing Options for Thicket Portage Public Consultation

August 2001

Report

All-Weather Road Servicing Options for Thicket Portage Public Consultation

Province of Manitoba
Manitoba Transportation & Government Services

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David P. Krahn, P. Eng., - Project Manager

Submitted by

Dillon Consulting Limited

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Attention: Mr. Amar Chadha, P. Eng.
Director of Transportation Systems Planning and Development

Summary Report for the Community of Thicket Portage Public Consultation

Dear Mr. Chadha:

Attached find the summary report for the Public Consultation and associated technical work that has been carried out relative to community access for Thicket Portage.

During the Public Consultation in Thicket Portage, the existing rail, air, winter road, forestry road, and boat access conditions were reviewed with the community and community leadership. Discussions also centred on the potential alternatives for access improvement and on the potential options for an All-Weather Road access. The visit to the community and discussions with the community leaders and residents provided the study team with a greater appreciation of the specific access issues faced by Thicket Portage residents.

We would like to acknowledge the support of the community leadership, Tolko, and also the direct involvement and technical input of Manitoba Transportation and Government Services.

Yours truly,

Dillon Consulting Limited

David P. Krahn, P. Eng.
Project Manager
Transportation Engineering
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SYNOPSIS

The Thicket Portage community, with its population of 217, is served by a combination of scheduled railway, winter road, and charter air operation. Access to the community from P.T.H. 6 is assured year-round; however, during the spring, summer, and fall, the community has experienced slow, unreliable, and relatively costly rail freight and passenger service. Air charter services have not always been available when required. During the winter road season, access to the community is much better and cheaper. In the summer, a combination of forestry road and boat travel does provide alternative access for both people and light freight.

There is a general perception in Thicket Portage that the rail service could be improved and that the winter road season could be extended. Also, measures could be taken to enhance the forestry road and boat access option by providing secure landing/storage areas.

An All-Weather Road access for Thicket Portage is estimated to cost more than $20 M and transportation benefits would only cover 20% of the cost. Given the existing year-around service provided by a combination of rail, air, winter road, forestry roads, and boats, the project will face strong competition for funding priority from numerous more remote communities.

As Thicket Portage does have year-around rail access, it is recommended that the short-term focus be on:

- Improvements to the forestry road and boat access system estimated to cost $0.5 M/year, primarily for improved service levels.
- Exploring the feasibility of rail improvement options such as a rail-bus dedicated to the service of remote communities such as Thicket Portage, Pikwitonei, and Ilford. Costs for such a service (not including running rights on the Hudson Bay Railroad), if feasible, would be in the order of $0.5 to $1.0 M per year primarily for improved service levels.

In the longer-term, the community's best interests would be served by an AWR skirting the east side of Wintering Lake (or parallelling the railway) and tying into the East Jonas Road. This would be the most direct and provide the least travel time for traffic to and from Thompson. To maximize the benefits and economic justification, this road should also serve both the Pikwitonei community and the Thicket Portage community.

It is therefore recommended that the best route for an AWR be established at this time in order to focus short-term winter road and forestry road upgrade investments on the optimum solution. This would avoid throw away costs and minimize the environmental impacts. It could also accommodate short-term measures such as dedicated boat service and winter road stream crossing improvements.

A route selection study should be undertaken to establish the optimum alignments for Thicket Portage and Pikwitonei to East Jonas Road. As well, a functional design study should be carried out to determine the necessary alignment and cross-section upgrades to improve reliability and ensure public safety.

1.0 INTRODUCTION

A public consultation meeting was held in the community of Thicket Portage on March 5, 2001. The objectives of this meeting were to seek community input on future directions of transportation initiatives and to provide the Province of Manitoba Transportation and Government Services Department with a better insight into the existing transportation system, seek justification for an All-Weather Road, and to examine alternative means of improving transportation service to Thicket Portage.

In attendance at this meeting were:

- Mayor Bob McCleverty
- Councillor Victor Ducharme
- Councillor Ricky Pronteau
- Councillor Natalie Bithern
- Council Clerk - Joanne Pronteau
- Twenty members of community
- Rod Murphy - Transportation & Government Services Minister's office
- Amar Chadha - Transportation & Government Services
- Dan Highway - Transportation & Government Services
- Garry Nebess - Aboriginal and Northern Affairs
- Bruce Holmes - Conservation - Natural Resources
- Don Aikman - Tolko
- Rod Pshabnicki - Tolko
- Larry Buhr - Dillon Consulting Limited
- Harold Westdal - H. Westdal Associates

2.0 EXISTING TRANSPORTATION SYSTEM AND SERVICE LEVELS

2.1 Community Profile

Thicket Portage is an isolated community approximately 50 km south of Thompson, Manitoba. It has a population of approximately 217. It came into existence as a railway siding and way station when the Hudson Bay line was first built. There are four commercial establishments, including retail, restaurant, railway, etc. The population growth has been estimated as follows:

- 2000 - 217
- 2010 - 245
- 2020 - 277
- 2030 - 312

The community of Thicket Portage relies on the Hudson Bay Railway (and VIA), non-scheduled air service, a combination Winter Road/Forestry Road access, and small boats for freight and passenger access to and from Thompson.

2.2 Railway

When the Hudson Bay was first built, rail traffic focussed on through trains to Churchill and in the resource development, particularly in the Thompson area. With the advent P.T.H. 6 (formerly 391), the railway function became more freight oriented with freight destined for Thompson, Churchill, and Nelson River Generating Stations, although passenger service (VIA) through Thompson and onto Churchill has continued.

The change in ownership of the Hudson Bay line (from CN to OMNI TRAX or HBRR) has perhaps unintentionally resulted in a different mandate/focus for the railway operation. It became a long haul operation; local service points and local maintenance operations became a secondary (if not non-essential) part of the railway functions. Movement of primary agricultural (wheat) and mining (nickel) products was now the primary driving forces of the system.

For Thicket Portage, this meant that rail passenger (and freight) service was cut from 13-14 train stops per week to six train stops per week. Freight operations no longer involved a stop-off when going north and south, but now involved only occasional way-freight pick-up going north and drop-off going south.

Railway service to Thicket Portage consists of three station stops/drop-offs southbound each week (Monday, Wednesday, and Friday). The Monday and Wednesday pick-ups are a.m. and do allow a few

hours for passengers in Thompson before a same-day return. On Friday, however, the departure from Thicket Portage is usually after 3:00 p.m., which precludes a return trip before Monday (three night stay in Thompson). The trains frequently run late by as much as two hours, but because there is no station agent in Thicket Portage, passengers (and shippers) have no way of knowing when trains will arrive from the south or from the north. There is no cellular phone service at Thicket Portage and there is no station phone.

The existing train schedules require almost everyone to spend two or three overnights in Thompson. As a result, direct trip costs are likely to be $200 to $250/trip; indirect (inconvenience) costs relating to job time losses and school absenteeism are difficult to quantify. VIA's policy of giving priority to through traffic (largely tourists) frequently limits boarding availability at Thicket Portage.

Freight services to Thicket Portage is severely constrained by VIA's operating policies. Limits on carry-on quantities and prohibition of fuel, engines, etc. that can be transported severely limit regular transport of goods to satisfy the community's needs.

More recently, Tolko's forest operations are likely to see the relocation of the train stop/siding from Thicket Portage to Hockin some 10 km to the southeast.

Railway freight service to Thicket Portage is largely handled through Gardewine North, who operate both highway and rail interline service plus winter road freight delivery services on a largely exclusive contract basis. This precludes alternative freight shipment arrangements for reasons of cost or convenience.

Multiple players/multiple rules have made it very difficult for Thicket Portage residents to effectively see redress for inadequate service/high cost implications.

2.3 Air Service

Thicket Portage has a provincially operated airstrip (2,220 feet long) with gravel surface and pilot activated landing lights. There is no scheduled air service, but Skyward and Pim Air do operate charter air taxi services out of Thompson for four-sector aircraft no larger than the Caravan.

The runway length precludes conventional life-flight landings, but does permit smaller aircraft to provide Medivac service to Thompson. A 1998 community presentation to Provincial Airports Safety Working Group did result in a recommendation for airstrip/airport improvements.

Because Thicket Portage does not have a scheduled air service (even though the original licence 15 years ago required this), air service to the community is highly unreliable. Airplane availability for short hops to the community is frequently in question.

The short runway, the frequency of cross winds, and occasional fog or snowy weather create a low reliability service. Both winter and summer air service can be cut short; emergency medical situations cannot always be served.

2.4 Winter Roads/Forestry Roads

Thicket Portage has a regular winter road operation into the community, which exits P.T.H. 6 six km south of Thompson, follows the North Jonas Road for 40 km and then crosses Wintering Lake ice for 15 km. This road is normally available for trucks/cars/etc. during January/February and most of March. The winter road system is intended to ensure access for two to three months (January, February, and mid-March) each winter except for blizzard conditions. The Winter Road Contractor is expected to keep the road passable under all conditions, except for blizzards and active snowfall. The community would like to see the road open sooner (e.g., by mid-December) and be more consistently maintained. The existing winter and forestry roads to Thicket Portage are shown on Figure 1.

Where a forestry road (e.g., North Jonas Road) is part of the functional winter road system, Tolko's forest operations are expected to maintain passibility of the winter road at all times. However, not too infrequently when the Forest Company's operational priorities are elsewhere, the local forest operations are temporarily shutdown and access road maintenance is also cutoff.

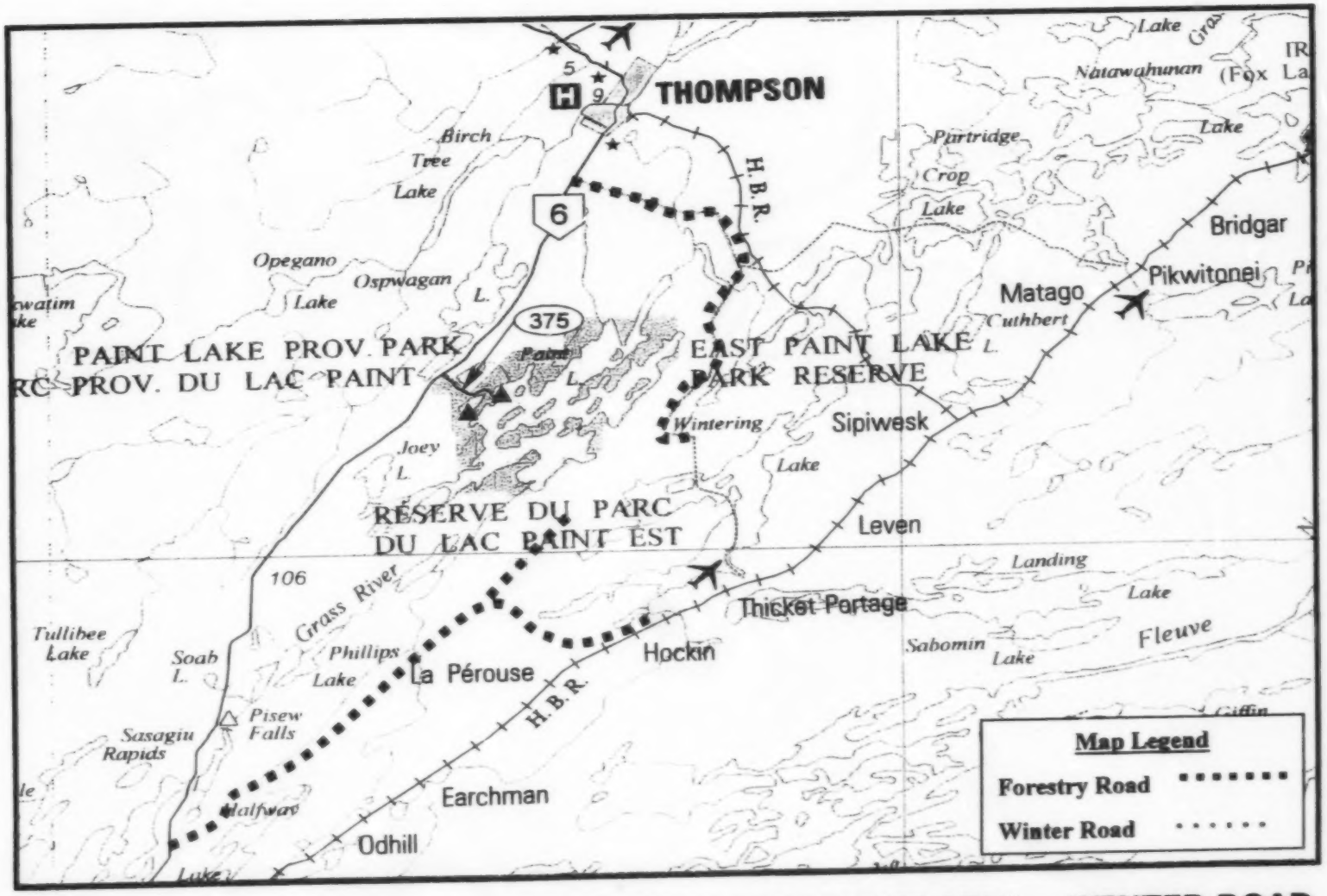
Tolko's logging trucks also pose a safety issue on what is essentially a one-lane road. Because of poor lake ice conditions such as in 1997-98, the winter road access can be cut short. Spring melt and summer rains can create unreliable and unsafe conditions on the Forestry Road. Muddy, slippery surfaces, deep ruts, and washouts further limit the available community transport usage.

Additionally, Tolko's forestry operations allow summer (but not spring or fall) vehicular access to within 15 km of Thicket Portage from the southeast via South Jonas Road. Continued Tolko operations could provide "normal summer" access for all- terrain vehicles and trucks from the south.

2.5 Water Access

Other than during the winter, the North Jonas Road is passable 60% to 70% of the time from P.T.H. 6 to within 3 km of Wintering Lake. This, with some difficulty, allows water transport of goods and passengers during the open water season of May to October.

Because of the summer fishery operations on Wintering Lake, small individually owned watercraft operate across Wintering Lake during the open water season of May to October. Small boats are also employed to transport fuel and groceries from the end of the North Jonas Road to Thicket Portage. Because there are



THICKET PORTAGE/PIKIWITONEI AREA – WINTER ROAD
SITE LOCATION PLAN

FIGURE 1

no specific transfer facilities, and available boats (number estimated at ten) are largely dedicated to the fisheries operations, this form of access is limited and heavily focussed on fuel transport.

Because there is no dedicated "water taxi" in Thicket Portage, the availability of boats for passenger travel and freight movement is not assured. Most of the watercraft is under fishery ownership, its availability for community transport is probably second priority.

There does not appear to be any official program of boat-related community access. Wharfing facilities are limited/inadequate; road connections to the waterfront are almost non-existent; there are no secure accommodation passenger and freight movement at the end of North Jonas Road. Periodic theft of gasoline, motors, etc. is a significant concern.

Weather conditions (storms, etc.) which affect air travel also affect water-borne travel. Because of the longer trip travel times, equipment breakdown can be more likely and more frequent.

2.6 Local Roads and Vehicles

There are only 4 km of local roads serving the community, the airport, and the solid waste landfill. Hence, there is little justification for locally owned vehicles. There are probably no more than 15 locally owned vehicles in Thicket Portage. This number rises in winter when access to Thompson is only 1.5 hours away. In summer when community access is by rail or by boat, vehicle operation out of Thompson is more effective.

Storage of personal vehicles in Thompson (sporadically during the winter) and full-time at the landing site during the summer can result in much higher vandalism and other risks.

Fairly frequent usage of the Winter Road provides a substantial degree of travel reliability. However, the condition of the Winter Road (compared to an All-Weather Road) will create a significant additional degree of wear and tear on vehicles operating on it.

3.0 EXISTING COMMUNITY INFRASTRUCTURE AND SERVICES

The following provides a brief overview of the existing community infrastructure of services:

Hydro/Telephone Services
Thicket Portage is serviced by local hydro and telephone grids.

Water Supply
Thicket Portage is serviced by a piped water distribution system. Water draws from Wintering Lake and is treated at a local water treatment plant.

Sewerage
Thicket Portage has a piped sewer collection system and a sewage treatment plant.

Medical
The community is served by a provincial community health worker and the Northern Patient Transport Program.

Schools
Thicket Portage has a Frontier School geared for Kindergarten to Grade 9 students. High school students typically travel to Thompson, Wabowden, Cranberry Portage, The Pas, and Winnipeg.

Police
Police service is provided by the Thompson RCMP.

Employment Opportunities
Fishing and trapping and to a lesser extent, wild rice harvesting, provide seasonal employment opportunities. Tolko's forest operations also provide potential seasonal jobs.

The community believes that an All-Weather Road would permit travel to the Thompson-INCO job market, development of tourism, cottage development, and access to a generally broader forest industry.

4.0 EXISTING COMMUNITY TRANSPORT NEEDS

Based on the current population, it is estimated that Thicket Portage requires the inflow of 1000 tonnes/year of fuels, building materials, equipment, food stuffs, etc. Based on available data and community comments, it is further estimated that the relative means of freight delivery to the community is as follows:

- Rail - 300 tonnes/year
- Air - 5 tonnes/year
- Winter Road - 660 tonnes/year
- Boat - 35 tonnes/year

It is worth noting that since the 1997 advent of land line power, that there has been a substantial conversion to electricity for building heating. Heating fuel import to the community has declined significantly.

The above does not include the gasoline and diesel fuel brought in by Tolko to sustain their forestry operations.

In the area of people transport, it is estimated that the community generates the following in and out transport:

- Rail - 1,000 trips (in and out)/year
- Air - 1,000 trips (in and out)/year
- Winter Road - 800 trips (in and out)/year
- Boat - 300 people trips (in and out)/year

Both the freight and people transport number would be expected to rise in step with population growth. This population has been estimated to grow at 2.0% per year.

5.0 COMMUNITY TRANSPORTATION COSTS - EXISTING VERSUS ALL-WEATHER ROAD SYSTEM

Manitoba Transportation & Government Services initial estimate of potential savings due to an All-Weather Road was $200,000. The reaction from the community was that this was too low.

It was further suggested that this cost did not recognize:

- Accommodation costs for the typical two or three night stay overs in Thompson for rail passenger traffic.
- Summer boat/Forestry Road travel for fuel, grocery, etc. supplies.
- Fish transport to Wabowden at rail costs of $0.13/kg.
- Frequent non-availability of passenger capacity when VIA trains stop at Thicket Portage.
- Medivac costs to Thompson.
- Ambulance costs from Thompson Airport to Thompson Hospital on Medivac.

While the actual cost of freight and passenger transport is highly dependent on a variety of factors such as vehicle load/ultimate origin or destination/etc., it is not unreasonable to suggest the following overall transport costs based on efficient use of equipment:

	Existing Winter Road System			All-Weather Road System		
Road Travel (to and from Thompson)	800 trips	@ $5.25	= $4,200	2,100 trips	@ $4.85	= $10,000
Road Freight (from Winnipeg)	660 tonnes	@ $0.59/kg	= $389,400	700 tonnes	@ $0.40/kg	= $280,000
Air Freight (from Winnipeg)	5 tonnes	@ $0.32/kg	= $1,600	nil		
Air Passengers (to/from Thompson)	1,000 trips	@ $75.00	= $75,000	nil		
Rail Freight (from Thompson)	300 tonnes	@ $0.19/kg	= $57,000	300 tonnes	@ $0.17/kg	= $51,000
Rail Passengers (to/from Thompson)	1,000 trips	@ $30.00	= $30,000	nil		
Boat/Forestry Road (freight and passengers)	300 trips	@ $50.00	= $15,000	nil		
Fish Transport (to Wabowden)	90 tonnes	@ $0.13/kg	= $11,700	90 tonnes	@ $0.11/kg	= $9,900
Medivac (to Thompson)	estimated @ $100,000			estimated @ $10,000		
Total System Costs	**$683,980/year**			**$360,900/year**		
Total System Savings due to All-Weather Road	**$323,000/year**					

Note:

The above does not include any potential cost savings that would accrue to Tolko's forestry operations or the possible elimination of airport maintenance and operation costs..

6.0 ALL-WEATHER ROAD SYSTEM - ROUTE ALTERNATIVES

The current winter road from Thompson to Thicket Portage consists of:

- 6 km of P.T.H. 6 (south from Thompson) - paved.
- 40 km of Forestry Road (North Jonas Road) - rough gravel.
- 3 km of overland winter road - cleared only.
- 17 km on Wintering Lake - ice road.

Further to discussions with the Mayor, Council, and community, All-Weather Road routes have been further redefined and/or re-identified as follows:

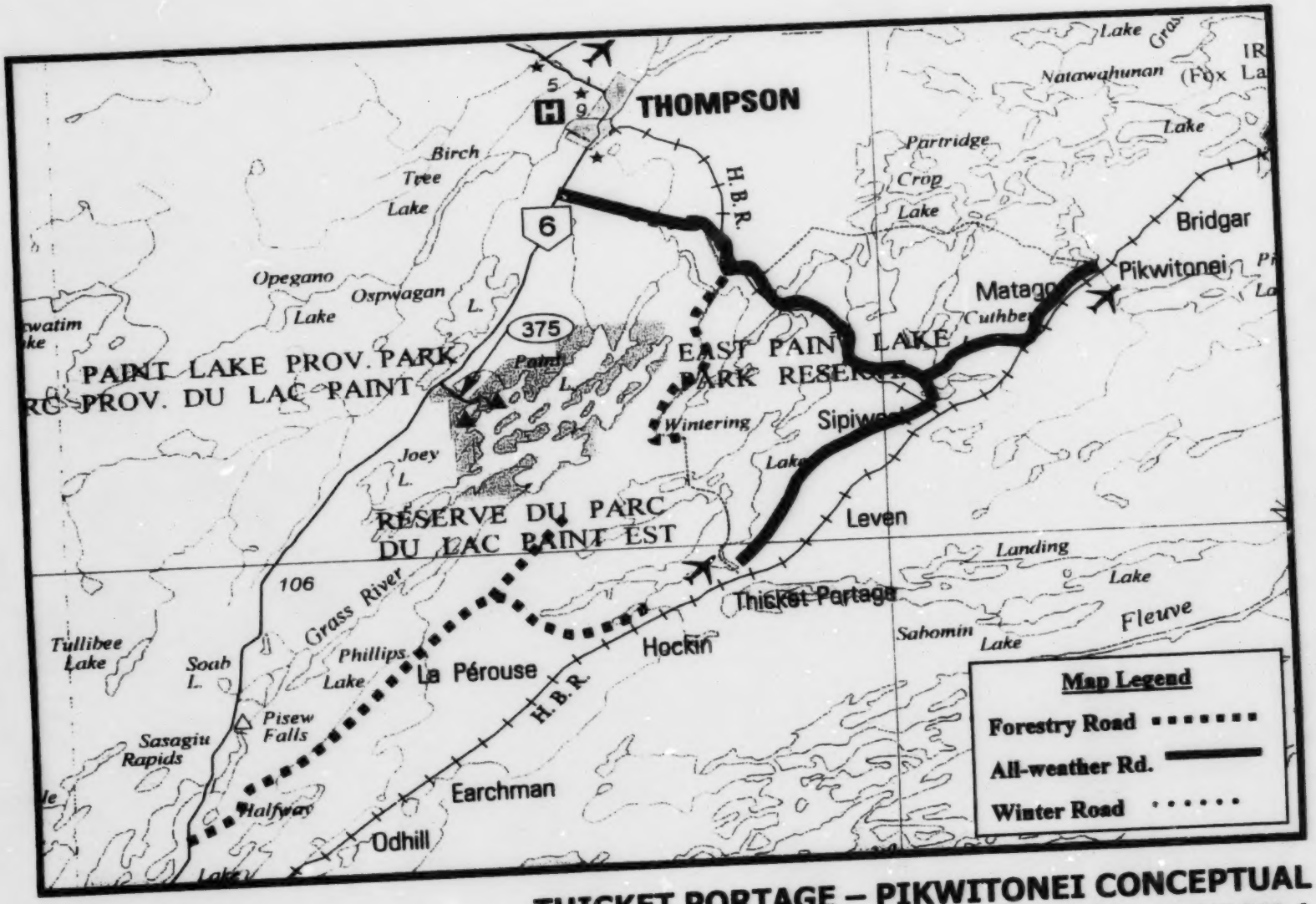
6.1 All-Weather Road from Northeast

It is anticipated that an All-Weather Road incorporating the North Jonas Road could be built for $23.0 M, including:

- $10.0 M for upgrading North Jonas Road.
- $4.5 M for extension of North Jonas Road to the junction with the Pikwitonei Access Road.
- $8.5 M for the connection from Pikwitonei junction to Thicket Portage.

This All-Weather Road roadway would have an equivalent annual cost of $2.1 M, including $120,000 of increased annual O & M costs. This All-Weather Road option is shown on Figure 2.

If this All-Weather Road were also extended to Pikwitonei, the total capital cost would be $30 M with equivalent annual costs of $2.7 M.



THICKET PORTAGE – PIKWITONEI CONCEPTUAL ALL WEATHER ROAD - OPTION 1

FIGURE 2

6.2 All-Weather Road from Southwest

Alternatively, the All-Weather Road to Thicket Portage could be an extension of South Jonas Road along the proposed Tolko forestry road system entering Thicket Portage from the south. This All-Weather Road project would have an overall capital cost of $12.2 M, including:

- $7.2 M for upgrading South Jonas Road and McLaren Creek Road (48 km distance).
- $5 M for a bridge and extension of McLaren Creek Road to south/east/north (15 km distance).

It would result in a 160 km travel distance to Thompson (compared to 70 km for the northeast All Weather Road.

6.3 Forestry Road - Boat Access

In lieu of full All-Weather Road access to Thicket Portage, it would be possible to upgrade and extend North Jonas Road to Wintering Lake, construct a secure storage/wharf facility at Wintering Lake and improve wharf facilities at Thicket Portage. A community-based water taxi/barge service could also be added to ensure reliable and scheduled services.

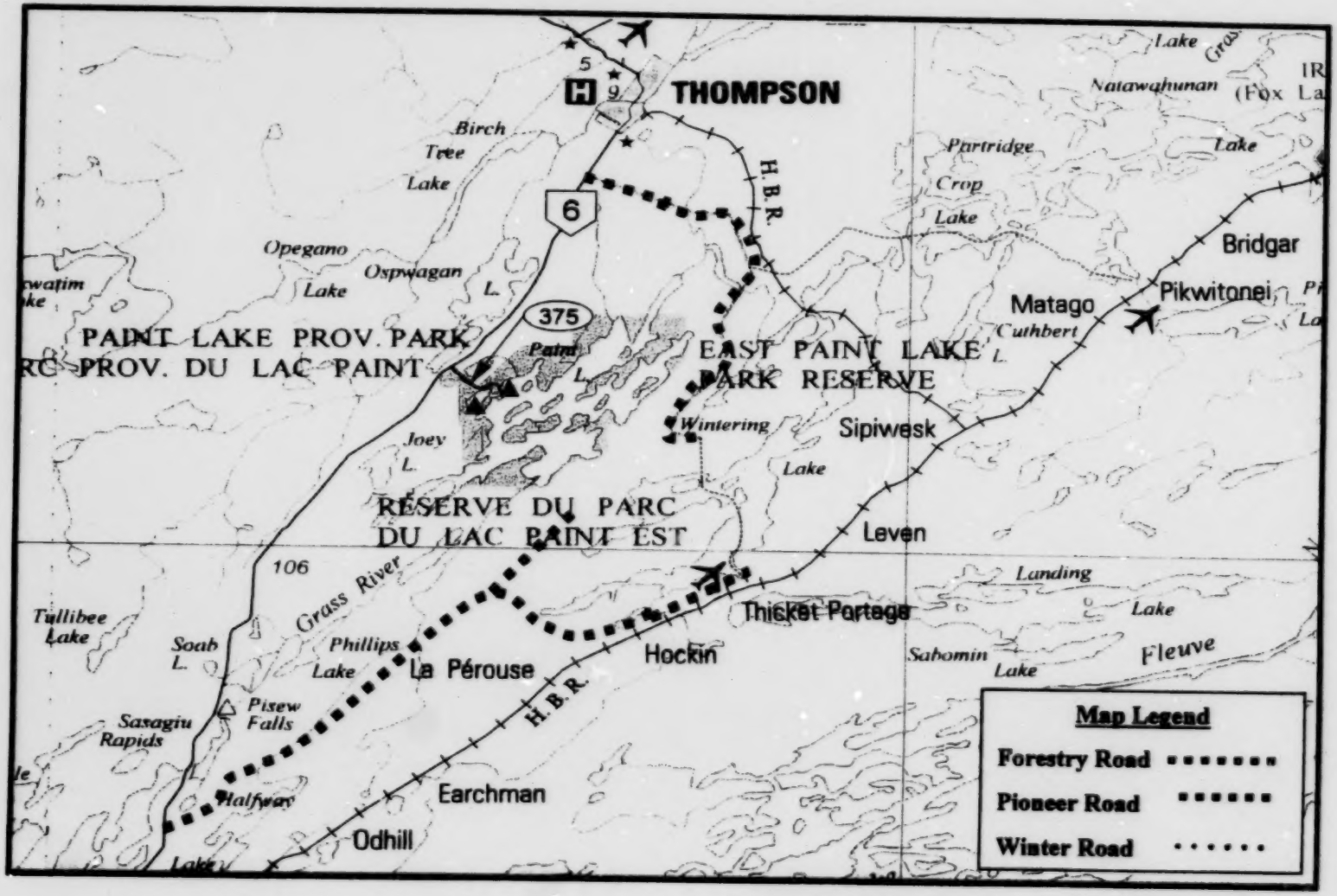
This would involve capital costs of $4 M and overall costs of such a service would be in the range of $0.5/year.

6.4 Lower Standard Road Access

Arguments have been presented that suggest a pioneer road (i.e., upgraded forestry road) would be adequate for Thicket Portage transport needs. Building such a road which does not meet Manitoba Transportation & Government Services standards presents serious liability and safety concerns. This option is shown on Figure 3.

The Mayor of Thicket Portage expressed cautious interest in such an approach, but requested a more concise definition of the Pioneer Road concept (its standards, its cost allocation/maintenance and operating responsibility).

Relatively speaking, such a Pioneer Road might be built at 60% of the cost of an All-Weather Road meeting provincial standards.



THICKET PORTAGE – PIONEER ROAD
INTERIM ENHANCEMENT - OPTION 2

FIGURE 3

6.5 Improved Rail Service

It has been suggested that a rail-bus service from Thompson could be a means of achieving more reliable and predictable passenger and freight service to Thicket Portage. If feasible, this would require substantial support and cooperation from Hudson Bay Railroad and VIA. Costs of such as service, if feasible, would be in the $0.50 to $1.0 M range/year, including rail-bus purchase, rail station at Thicket Portage, rail-bus maintenance shelter, dedicated rail-bus operating crews, and annual operating and maintenance costs. Lease of travelling rights would be additional.

7.0 OPPORTUNITIES AND SOCIAL IMPACTS

Thicket Portage currently cannot support all the normal community services that would make it a desirable place to live. There is only one store in operation, no gas station, etc.

With an All-Weather Road, the community sees new opportunities such as:

- Local stores, service stations, and restaurant.
- Employment in Thompson area.
- Employment in broader resource industry.
- Cottage development.
- High school students living at home while pursuing education in Thompson.
- Easier access to medical/dental services.
- Access to banking and other professional services.
- More reliable and quicker fish delivery to Wabowden.
- Tourism and related industry.
- Year around travel/lower cost personal travel.

Social impacts to the community were perceived as positive and negative. An expanded social life could be good or bad. Easier access to and from Thompson would promote a better lifestyle, but it could also promote crime/drug use/etc. It would also bring outsider cottage development and resource exploitation.

8.0 OVERALL STRATEGIC ANALYSIS AND CONSIDERATIONS

The provision of an All-Weather Road to Thicket Portage would incur annual costs of $2.1 M/year ($2.1 M - 20-year present value). Resulting direct transportation cost savings would be $323,000/year ($4.2 M - 20-year present value), covering approximately 20% of the All-Weather Road costs. As such, the project will require substantial additional justification on a socioeconomic basis in order to become a funding priority. (Note: if Pikwitonei is also connected by an All-Weather Road, the annual costs would rise to $2.7 M a nd direct transportation benefits would total $600,000/year, still only a 20% coverage).

Alternative strategies that result in improved and more reliable transport services, but lower capital costs, are:

	Annual Costs	Transport Annual Benefits
• All-Weather Road from Southeast	$1.0 M	$0.25 M±
• Forestry Road/Boat Access	$0.5 M	$0.05 M±
• Lower Standard Access Road	$1.0 to $2.0 M	$0.10 M±
• Improved Rail Service	$0.5 to $1.0 M	$0.05 M±

The foregoing estimates of costs and transport benefits are very approximate, but do reasonably reflect the relative transport merits of different strategies. Service level improvements are not factored into the above.

It is suggested that these alternative strategies are not likely to achieve long-term satisfaction in the Thicket Portage community. A southeast access involves longer travel times (even more so for Pikwitonei). The forestry road/boat access involving the lowest initial capital investment would be a short-term measure. Lowering the standards will create new reliability safety issues, which will point to a near future upgrade. Improved rail service would require support from Hudson Bay Railroad/VIA and the communities of Pikwitonei and Ilford.

A decision on a future strategy will require further investigation into the actual feasibility of all alternatives. But as a short-term measure, the forestry road/boat access scenario does present itself as the most affordable alternative.

In the longer-term, the community's best interests would be served by an AWR skirting the east side of Wintering Lake (or parallelling the railway) and tying into the East Jonas Road. This would be the most direct and provide the least travel time for traffic to and from Thompson. To maximize the benefits and economic justification, this road should also serve both the Pikwitonei community and the Thicket Portage community.

It is therefore recommended that the best route for an AWR be established at this time in order to focus short-term winter road and forestry road upgrade investments on the optimum solution. This would avoid throw away costs and minimize the environmental impacts. It could also accommodate short-term measures such as dedicated boat service and winter road stream crossing improvements.

A route selection study should be undertaken to establish the optimum alignments for Thicket Portage and Pikwitonei to East Jonas Road. As well, a functional design study should be carried out to determine the necessary alignment and cross-section upgrades to improve reliability and ensure public safety.